



October TPCBAC Packet Guide

We have discontinued the printing and mailing of paper packets.

1. TPCBAC October 8, 2014 Agenda
2. BAC June 2014 Rooster (yes it needs to be updated)
3. Draft TPCBAC September minutes
- Sent Letters
4. Repaving request
5. Flange filler request
6. Enforcement materials request
- Consent Letters
7. Church Street
8. Moore Road
- Sub-Committee Minutes
9. Urban Core Facilities (Facilities and Enforcement didn't meet) Attachments
10. Living Streets Alliance events
11. Streetcar Bicycle Facilities Best Practices
12. Gas Tax funding study
13. Pittsburgh pro bike video
14. Bike comfort v. bike safety essay
15. Bike politics in perspective
16. New York City and Washington D.C. protected bike lanes
17. 10 not 12 foot lanes article

Tucson-Pima County BICYCLE ADVISORY COMMITTEE
12 Members Necessary for Quorum

www.BikeTucson.Pima.Gov

<u>City of Tucson</u>	<u>Representation</u>	<u>Appointment Date</u>	<u>BAC Term Expires</u>
1 Cameron Hummels	Representative for Mayor Jonathon Rothschild	12/27/2013	12/7/2015
2 Glenn Grafton	Representative for University of Arizona	4/23/2013	4/22/2017
3 Naomi Mclsaac	Representative for Ward 1	6/12/2012	12/7/2015
4 Ian Johnson Vice-Chair	Representative for Ward 2	12/13/2011	12/7/2015
5 Kylie Walzak	Representative for Ward 3	12/3/2013	12/4/2017
6 John Cousins	Representative for Ward 4	12/5/2011	12/7/2015
7 Anne Padias	Representative for Ward 5	2/4/2014	12/4/2017
8 Sam Sanford Parliamentarian	Representative for Ward 6	12/3/2013	12/4/2017
<u>Pima County</u>			
9 David Bachman-Williams Chair	Representative for Pima County	7/12/2011	8/31/2015
10 Brian D. Beck	Representative for Pima County	1/8/2013	1/31/2015
11 Raymond Copenhaver	Representative for Pima County	5/2/2012	2/28/2014
12 Wayne Cullop	Representative for Pima County	1/8/2013	1/31/2015
13 Collin Forbes Secretary	Representative for Pima County	8/19/2013	8/18/2015
14 Tom Hausam	Representative for Pima County	5/21/2013	5/20/2015
15 Allen Kulwin	Representative for Pima County	6/4/2013	6/30/2015
16 Tom Nieman	Representative for Pima County	10/1/2013	9/30/2015
17 Eric Post	Representative for Pima County	8/19/2013	8/18/2015
18 Robin Steinberg	Representative for Pima County	12/17/2013	5/20/2015
<u>Other Jurisdictions</u>			
19 Glenn Pfeleiderer	Representative for Town of Marana	3/18/2014	3/18/2018
20 Adam Wade	Representative for Town of Oro Valley	6/19/2012	12/31/2013
21 Anthony Amos	Representative for Town of Sahuarita	6/22/2012	6/10/2014
22 Edward G. Yasenchack	Representative for Davis-Monthan Air Force Base	3/7/2013	3/29/2016
23 Glenn Grafton	Representative for University of Arizona	4/23/2013	4/22/2017
<u>Ex-Officio</u>			
Ann Chanecka	City of Tucson Department of Transportation	6/10/2010	
Nancy Ellis	Oro Valley Parks and Recreation Department	1/1/2004	
David Fernandez	City of Tucson Police Department	5/16/2013	
Deputy Ryan Roher	Pima County Sheriff's Department	5/6/2010	
Roy Schoonover		5/6/2010	
Gabriel Thum	Pima Association of Governments	6/10/2010	
	Town of Marana	5/6/2010	
Matt Zoll	Pima County Department of Transportation	1/1/2004	

For questions or corrections, please contact Ann Chanecka at 837-6691 or ann.chanecka@tucsonaz.gov



Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the **Tucson-Pima County Bicycle Advisory Committee** and to the general public that the **Tucson-Pima County Bicycle Advisory Committee** will hold the following meeting which will be open to the public:

Meeting Date: Wednesday, October 8, 2014

Meeting Location: Himmel Park Library, 1035 N Treat Ave Tucson, AZ 85716

Meeting Time: 6:00 PM

Please arrive by 5:50 PM. If a quorum of 12 members is not reached by 6:10 PM City, County and other staff are required to leave and the meeting will be canceled. Please lock your bikes outside the meeting room. If front door is locked, please use rear entrance.

Agenda

	Projected Duration
1. Call to Order ; approval of September 2014 meeting minutes	5min
2. Call to Public This is the time when any member of the public may address the BAC. Due to time constraints, the total time allocated for this is 10 minutes. Individuals are allowed three minutes each. If additional time is needed to address the BAC, it may be considered as an agenda item for a future meeting.	10min
3. Law Enforcement Staff Reports from TPD and PCS	15 min
4. Bike Share Program: TDOT consultant	30 min
5. Broadway Task Force Recommendation Tomorrow	20 min
6. League of American Bicyclists Platinum Application Process	10 min
7. BAC agenda process, how to get items on the BAC agenda	5 min
8. Possible Retreat: Timing and content	10 min

9. Consent Items

5 min

- a. Church Street protected bike lanes letter (Urban Core)
- b. Moore Road adding bike lanes (Facilities)

10. Staff Reports

Ann Chanecka, City of Tucson; Matt Zoll, Pima County; Nancy Ellis, Oro Valley; Matt Christman, Marana; Gabe Thum, Pima Association of Governments, Glenn Grafton, UA

11. Subcommittee Reports

Urban Core Facilities (Ian Johnson)
Enforcement (Colin Forbes)
Facilities (Adam Wade/Brian Beck)
Executive (David Bachman-Williams)

12. BAC representative and liaison reports

GABA (Wayne Cullop/Eric Post)
Downtown Links (Kylie Walzak)
RTP 2045 (Ian Johnson)
Broadway Task Force (Anne Padias)
Living Streets Alliance (Kylie Walzak)
SCVBAC (Tony Amos)

13. Announcements

14. Adjournment

If you require an accommodation or materials in accessible format or require a foreign language interpreter or materials in a language other than English for this event, please notify the Tucson Department of Transportation Office at 791-4391 at least five business days in advance.



The **Tucson-Pima County Bicycle Advisory Committee** conducted a public meeting on **September 10, 2014** at the Himmel Park Library, 1035 N Treat Ave, Tucson AZ.

DRAFT Meeting Minutes, Not Yet Approved

Prepared by Collin Forbes

1. Call to Order; approval of August 2014 meeting minutes — 6:02 p.m.

Motion: by Tom Neiman to approve the minutes. Seconded by Tom Hausam. **Approved unanimously.**

2. Call to Public

David Bachman-Williams presented two pieces of correspondence for the BAC. One was concerning the bike share program, another was from the City of Tucson informing us that they were receiving federal money to do safety improvements for Congress/Toole/4th with construction set for next summer. He handed the letter off to the urban core subcommittee for their next meeting.

On his way to the meeting, Collin Forbes saw a three-car crash at 6th and Tucson which could have been prevented by the proposed road diet on 6th Street.

3. Law Enforcement Staff Reports from TPD and PCS

Sgt Fernandez reported for Tucson Police Department.

- Hit & Run at Golf Links/Kolb. Cyclist was hit from behind and couldn't describe car or driver.
- Hit & Run at 36th/Park. The cyclist was northbound in the southbound lane on Park, ran light and was hit. The motorist left the scene and the cyclist wasn't able to give any information about the car or driver.
- Hit & Run at Broadway/Pantano. A school-age cyclist was hit and motorist stopped but the cyclist had to get to school. The crash was reported by the principal and was investigated hours later.

- Fatality at 29th/Swan. Vehicle was northbound on Swan in the median lane. The cyclist darted out in front. Speed of the motorist 37 mph. Sgt Fernandez said the witnesses said the cyclist ran the red light.

Eric post is always concerned about Hit & Runs, and is especially concerned about hearing about so many tonight. If there's any shred of evidence, try to follow it up. What we really need is a message to the public saying "knock it off." Perhaps a high profile prosecution would help.

Cameron Hummels, was suprised at how many as well, perhaps a letter to the editor making the public aware.

Sgt Fernandez: On a media release, the message needs to be that if you are on a bike you also need to ride the right way. Everybody has a bit of responsibility. He's not condoning the hit & run though.

Robin Steinberg asked about the penalties of leaving the scene of an accident.

Sgt Fernandez: You have the duty to stay on the scene, move the car out of the way and exchange information. Eric added, leaving is a potentially lethal situation. Once you decide to leave, you are moving into criminal territory.

Adam Wade said a press release could help address wrong-way riding as well as hit & runs.

4. PAG request for TAP applications due in October: Sam Sanford

TAP is the Transportation Alternative Program. SRTS (Safe Routes To School) and TE (Transportation Enhancements) got rolled into TAP along with Rails To Trails.

PAG is looking for projects to put into a competitive process. There's about \$1 million to distribute. A lot of different types can qualify, but Bike/Ped projects definitely qualify. Projects need to be sponsored by a governmental organization. Nonprofits can add their support.

David Bachman-Williams: Realistic expectations are that one or two projects involving bicycles will get funding in the \$150,000 to \$250,000 range. We might get a project for \$500,000, but that would be rare.

Applications need to be in by October 10. They will be reviewed by the PAG staff and then presented to the Bike/Ped Task Force at PAG. They will look and finalize the scores at a meeting on November 4. David Bachman-Williams is on the PAG task force.

Sam went over what could be considered “bike-related” funding. There’s a wide gamut of projects, including buffelgrass elimination and Highway Vista pullouts. Bicycle funding is not guaranteed, but projects are ranked on quality.

Ian Johnson thinks it would be good to invite the jurisdictions to bring projects forward and let us know if they want our support.

5. Streetcar crash data

To begin with, David Bachman-Williams shared a humbling story — the streetcar tracks took him down on Monday. His granddaughter was on the tagalong bike and was also part of the crash. He was trying to avoid a rain puddle and slipped on the wet track. It was as if the tracks had been greased after the rain. Nobody was injured though.

The LSA has been collecting information about crashes on the streetcar route using an online form for about two years. Reports are still being collected. The newspapers showed the scary data but didn’t also include the safety recommendations which would have helped them. The crashes have been self reported, which means it’s very low. They have attempted to get data from UMC, but their database doesn’t track injuries the same way.

The primary purpose to collect data is to help the city to see where there are problems. If there’s no car involved, TPD won’t come out to record the crash. ADOT isn’t interested in that data either. Note, this data is in support of the streetcar. Anything which makes Tucson less car-dependent is good.

Ian Johnson showed a heat map of crashes. There were focus points at Main Gate, University Blvd near Second Street, 4th Ave in front of Epic. There’s also a big splotch of red on the Toole Intersection. This is a public map, you can look at it online. If you go into the feature map, you can see the narrative from each submission.

Data, Charts & Graphs:

- Helmet Use: 74% said they were wearing a helmet.
- Experience: 48% had 6+ years riding in an urban environment. 21% had been riding for more than 3 years.

- Age Range: 40% were over 60. 21% in 40-50. Lots of college kids though. Possible bias that older people “break more easily.” A college kid may “bounce” and just forget about it and not report their crash.
- Cause (from narrative): 43% were from a bad angle, 28% an obstacle in bike lane, including delivery trucks. 13% were at pinch points, trying to thread the needle. One person complained about the pedestrian bumpout. 3 crashes were from wet tracks. One guy couldn’t see the tracks because they were underwater!
- Severity: 66% bruises/scrapes. 30% were major. 4 crashes had no injury. Some bias, people not hurt that bad may not be motivated to report this. Some people submitted photos. Real injuries. We were squirming in pain just looking at them.

Education is not going to solve the problem by itself. 17% of the issues are considered “resolved.” — The red curb in front of the Playground, Epic Cafe and Bookstop. The city has been responding to these as they come. The Streetcar Team and Ward 6 have been helpful.

People said they felt they were so lucky they weren’t hit by a car when they crashed. No reports of the streetcar hitting a bicycle. No reports of cars hitting a cyclist who had wrecked on the tracks.

Other issues:

- Jim Glock Bypass. A neverending series of events. The owner blocked it off with dumpsters, and had dug a trench across the access. We need to work to explain to the owners that this is a throughway.
- Also, lousy parking outside the lines will only be enforced if it impedes the streetcar. Would love to see more “militant” enforcement to keep the cars in the parking area.

Looking at Seattle examples, it’s a political lift to remove parking in favor of bicycle safety, but the BAC can help. One of the examples showed Seattle using a totally separated bike lane with the streetcar tracks all the way on the other side of the street. There are no cookie cutter solutions, but separating the bike lane can keep the bike lane open.

Adam Wade asked about crashes west of the interstate. There were some crashes on Avenida del Convento, but otherwise there’s very little west of 6th Ave. In those parts, there’s not much in the way of parking conflicts, also Granada and Cushing have good bike lanes separate from the tracks.

Brian Beck asked if anybody is suing the city as a result. Eric Post knows of three. He's not taking the cases because of a potential of a conflict. He knows that one of the crashes pending has a fairly substantial brain injury.

Eric Post pointed out the difference between Streetcar Education and Education. He asked if there have been any attempts at dedicated streetcar education. Specifically "this is a good angle" for the tracks. Adding in the water or oil to make it slippery. Some education will remove a 10% wedge out of one of the charts. Ian responded that you aren't ever going to get 100% of the riders. Maybe not 30% of the riders. We need to make the actual built environment so you aren't going to be hurt so badly.

Matt Zoll said Pima County has 6 or 7 types of classes. "Traffic Skills 101", "Back on the Bike" Class, the youth bike camps and the diversion program as well. If the location works, they do some hands-on training with the tracks. They reach 7000 cyclists each year this way.

6. Streetcar concerns

David Bachman Williams introduced Jeremy Papuga, Transit Administrator of the City of Tucson. Jeremy is the city's liaison with the Streetcar, with Suntran, and basically all public transportation.

In August, a cyclist named Paul Thomas reported an incident and wrote a narrative to members of the BAC, the web site bicycletucson.com and the Mayor & Council. The streetcar driver was suspended and put through some retraining. This sends a message to the other drivers to take it seriously.

Highlights of Hardcopy Powerpoint Presentation:

- Sun Link Response
 - After notification of the incident, the tape was reviewed by Sun Link Staff.
 - It was determined the 3ft zone was violated.
 - Disciplinary action was taken.
 - Retraining was required.
 - Zero Tolerance — disciplinary action on 1st infraction
- Sun Link Procedures & Rules
 - As stated in SOP 105.07: SLS Operators are responsible for operating their streetcar on the right-of-way (ROW) within the streets of Tucson according to all traffic laws established by the State of Arizona and City of Tucson. SLS

Operators are also required to adhere to the rules, procedures and policies outlined by SLS.

- As stated in SLS Rule Book 4.05: Streetcar(s) in a street environment must be operated with particular attention to traffic, bikes, skateboarders, pedestrians and motorists sitting in the driver's side of a parked vehicle along the alignment. Streetcar operators will be subject to indications of regular traffic signals and signs. Operators must comply with all motor vehicle laws except where special signals and signs govern streetcar operation.
- Employee Notifications
 - Bulletins are issued when important information needs to be conveyed to employees.
 - All employees must sign that bulletin has been read.
- How to Report an Incident
 - Call Sun Tran Customer Service: 792-9222
 - Send email to: sunlinkstreetcarcomments@tucsonaz.gov
 - Email me: jeremy.papuga@tucsonaz.gov
 - Helpful information: streetcar number, time, date, direction of travel and location.

Jeremy Papuga was disappointed by the driver in the incident. He said the management team did what it was supposed to, though. They are looking for ways to improve this. Mike McKisson asked if anybody is reviewing the cameras on a regular basis. Police were called on this incident, but the tapes weren't reviewed until after the mayor had been emailed. Jeremy said they aren't usually looking at the tapes. Collin Forbes said they should make a point to review the tapes whenever there is a TPD incident.

Mike McKisson said he has found out the streetcar video is not considered to be a public record. Any tapes sent to TPD can be a public record, but it's not generally available. This is a minor incident, but Mike is concerned about what happens when there is more of a crash and we can't get the video.

Cameron Hummels sent in a complaint on the 15th of July. He was riding near 4th/University when the streetcar passed to closely. His complaint apparently wasn't recorded. Collin pointed out we had the same problem as early as January and asked what is in place to keep this from happening again in another 6 months.

Jeremy said they have had over 2800 hours of revenue service to date, and a safety plan for all operators. Each operator must have 40 hours of "behind the stick" training where they are operating in the environment with a supervisor.

Matt Zoll mentioned one of the instructors of the Pima County classes is also a Sun Tran bus driver has has been used to train other bus drivers on bike-related issues.

Tom Hausam asked about the difficulty of measuring 3 feet. Is there a line? What to do? Jeremy said drivers are taught that if there's a question, they shouldn't pass. Eric Post said it's an evidence issue and 3 feet is a minimum. A larger distance may be needed for safety. The statute says to pass with safety, and a pass which scares the rider is not a safe pass. Jeremy reiterated that drivers are taught to pass safely.

David Bachman-Williams said during the design phase of the streetcar, lots of people said the streetcar would never go faster than 20 mph. He said he has seen it going faster than that on University Blvd. On University, the cars can go fast enough to overtake cyclists, but some of the other places, they are slower than your typical cyclist.

Mike McKisson asked if the streetcar bell is meant to be used like a horn. Is there a SOP about using the bell? Jeremy had experience with this on his bike. A streetcar passed him without the bell and startled him. The bell is to make a presence and to let people know the streetcar is there. It is also rung at stations to let people know. Jeremy doesn't know the specifics of the bell usage, but he thinks it is meant as a friendly reminder rather than a horn.

Ian Johnson: we spent a long time talking about streetcars and bikes. Now that it's built, what can we do to go forward now that it is running? How can we proactively and productively work with you? Jeremy is an administrator and Ann Chanecka would be a good conduit for the discussion. Technology changes, and new solutions can be explored. At the end of the day, the streetcar will be judged by the compatibility with the urban environment. That includes bikes.

Looking at streetcar delays, bikes aren't much of a problem. The pedestrians on 2nd Street are a problem. The pedestrians crossing Congress are also a problem. Lots of people cross and only one car gets through the underpass during the green light. The closures of the 4th Avenue underpass help the streetcar get through.

David Bui asked about the experience of streetcars in other cities. Jeremy said it's a very subjective measurement. Tucson is being really good about allowing all modes of transportation on the route. Washington DC tried to ban bikes on their route. Portland is looked to as a beacon of bike friendliness, but people have complaints there. Ultimately there's no answer, because it's so subjective. Eric Post added DC may be able to get

away with it due to Federal laws. Arizona has a law saying cyclists have a right to the road. Jeremy warned not to take his comments out of context, he doesn't know the specifics in Washington DC. He said he knows we'd fight a bike ban tooth and nail.

Robin returned to the speed question: What is the average speed needed for the streetcar to complete its route on schedule? Jeremy said the schedule was set up to operate under the same parameters of the traffic. The average speed is under 20mph, but that includes dwell time and stoplights. Different areas have different speeds. The 4th Ave Underpass is particularly bad.

David Bachman-Williams closed the discussion by reminding us Jeremy is one of the good guys. There is contact information in the handout, and they are looking for ways to get more information to make the streetcar safer.

7. Diversion Class Funding

Six years into the Diversion Program, the fun parts are over and now we need to find permanent funding for the classes. It's not fair to expect the county to continue to pay for it just because they did at the start.

There have been letters between the county and the city about funding and where the funding should come from. The issue is that the majority of the people in the diversion program are residents of the City of Tucson. The outlying cities average one person a year and it's not worth it to ask them to pay their share.

Matt Zoll says it's a very successful program. The primary tickets are for wrong-way riding, which is also our primary crash type. One little way to change your riding increases your safety.

There have been 2700 people through the program as of the end of this month. 400 from UA, a trickle from Pima County and a very small trickle from outlying cities. Principally it's tickets issued by TPD for city residents. The city courts have been excellent to work with.

Matt Zoll said the cost is a little over \$100 per head. The LCIs for the classes are somewhat underpaid, which keeps the costs down. It's a popular program and word gets around, it's a challenge to support this though. The county will continue supporting this through the fiscal year, which ends in June. There is funding available, primarily federal funding. In the next 4 or 5 years, it looks like there will be funding available.

Matt said people sometimes ask if this is about enforcement, why does Pima County do this? ADOT and TPD handle motorist diversion programs, so it makes sense for Pima County to do this too. Brian Beck asked about the funding for the motorist classes. Matt said you pay "a chunk of cash to do it." Matt is looking for some buy-in to get people to pay to support the program. Maybe if they pay \$30 to cover the course. You can't go too high or people will just take community service and clog the courts.

Ian Johnson asked what will happen to the staff and other funding after Pima County discontinues funding the program. Matt said they have a backlog of needs for other classes. Safety along The Loop and such. More than enough work is available for the instructors.

Eric Post said the prosecutor had a good point about the rider needing to pay some money. The person who got the ticket has to have some stake in it. A free ride doesn't carry the message that a \$25 fee carries. He is very much in support of a \$25 or \$30 fee. It doesn't support the whole program, but it helps ease the pain of the program. Eric would like a letter to send in support of a small fee. Matt Zoll said the letter would go to Baird Greene, the City Prosecutor, and a lot of the program would go into the prosecutor's hands. Pima County can't handle the money, so the courts may have their overhead as well.

Ian Johnson asked whether it makes sense to have PAG look into this. A new program would need to be developed.

David Bachman-Williams would like to see the diversion program continue. Lets ask for funding to happen, partially by participants and looking for other funds. Eric reminded us to be careful about asking the prosecutor's office for money, prosecutors have extra burden for notices and such. They don't want to pay a penny.

Adam Wade did some math and came up with \$45,000 a year as an estimate for the diversion program. This is not a lot of money.

David Bachman-Williams said this deserves support. The Enforcement subcommittee should look at this. We should try to find money for this to continue.

Ian Johnson said it would be good to find out what the city wants to do with the program before asking the city council for money. They may have big plans for the program, and sending a letter right now would be premature.

Eric Post would like to see statistics. Is the diversion program a good tool for reducing crashes. We have names in the court databases, so it would need to be a name search against the records of the diversion program.

8. Consent Items

The letter about Moore Road was not in the packet and was pulled by David Bachman-Williams.

Motion: by Brian Beck to approve three remaining items. Ian Johnson seconded. **All were in favor.**

Letters approved:

- Speedway Restriping Opportunities letter
- Streetcar Training Manual request letter
- Streetcar Flange Filler request letter

9. Staff Reports

Matt Zoll had to leave early. He left a page for us.

- International Walk & Bike to School Day in October. Assisting the City of Tucson Safe Routes program with Walktober activities at four schools and with the county's 2nd/4th grade bike and pedestrian education program.
- Continuing Bike Safety Classes for adults and for middle school students. Continuing with Bike Diversion program as well.
- Staffing the UA/Pima County Bike Stations.
- Started "Burma Shave" safety campaign on The Loop.

Jessica Hersh-Ballering

- Ann is at a conference.
- Conversations about how to move forward with the diversion program.
- Doing a "Light the Night" program with LSA and PAG. End of Sept or early Oct.
- Please subscribe to their Bike/Ped Email Newsletter

Sam Sanford, PAG

- Reiterate TAP funds. This is the time to get into it. It's good for infrastructure, especially for bikes. However, it's a very long process, so get them in early.
- The Annual Bike & Pedestrian Count is coming up. Many BAC members have participated in the past. This year it is Oct 18 to Nov 1. They didn't want to count during Cyclovia, because it would inflate the numbers too much. The sign up pages

are up and running already. It runs javascript rather than silverlight so it works on real computers. The URL is in step 2 of the handout.

10. Subcommittee Reports

Ian Johnson, Urban Core

- They talked about Stevens Road being changed into a 2 way bike lane between 4th and 5th Avenues. But TDOT changed that into a bypass route for cars when the underpass is closed.
- On Church Avenue, there's an opportunity for funding. They will be following that to see where it goes
- Next meeting is Tuesday at 6 at Maker House. They will be talking about 3rd Street issues and Bollards.

Adam Wade, Facilities

- LAB issues with Platinum Challenge.
- Wrong-way riding signage. What we can do to prevent that.
- Oracle/River intersection. The team went out to do an assessment of the bike path. The bike path stops shy of The Loop. Writing a letter asking for a roadway safety analysis.
- They are talking about the benefits of lane reductions. From 12 to 11 or 10 feet.

Collin Forbes, Enforcement.

- We have lots to do. Lots in the minutes already.
- Planning to do some data, as well. David Bui has data for research, hope to help with that.

11. BAC representative reports

Wayne Cullop, GABA

- Swap meet moved to coincide with cyclovia.
- Rides coming up, Silverbell and Tumacacori.

Anne Padias, Broadway Task Force

- They are coming to some firm ideas. A draft proposal is going to the city council on Sept 23. It's 6 lanes including public transportation, or 4 + 2 dedicated lanes.
- The question is open about whether the busses are inside or outside. If dedicated lanes, the busses might not have to leave their lanes on the inside.

- Bicycles are in good shape. There's bike lanes all along. Pedestrians have sidewalks as well. The bike lanes will be elevated, with a visible edge. Naomi McIsaac did a good job taking care of things when she was on the task force.
- There is some opposition from the neighborhood. Locations outside the widening area are going to be affected by new businesses after the widening. The city already owns a lot of the properties that will be affected. Many merchants just want a decision. The church near Campbell/Broadway is a question. Should it stay or not? The church itself may want to move.

Ian Johnson, LSA

- New cyclovia route starting from 6th Ave/7th St in front of Tap & Bottle.
- Cyclovia is also happening the same day as the bike swap!

12. Announcements

No announcements

13. Adjournment — 8:06 p.m.

Attendance:

David Bachman-Williams, Pima County
 Brian Beck, Pima County
 David Bui, Ward 6
 Ray Copenhaver, Pima County
 Wayne Cullop, Pima County
 Collin Forbes, Pima County
 Glenn Grafton, UA
 Tom Hausam, Pima County
 Cameron Hummels, Mayor's Rep
 Ian Johnson, Ward 2
 Anne Padias, Ward 5
 Eric Post, Pima County
 Tom Neiman, Pima County
 Robin Steinberg, Pima County
 Adam Wade, Oro Valley

Audience:

Jessica Hersh-Ballering, TDOT
 Mariano Rodriguez, City of Tucson
 Mike McKisson, BicycleTucson.com
 Sgt David Fernandez, TPD
 Jeremy Papuga, City of Tucson
 Samuel Sanford, PAG
 Amy Stabler, Ward 6
 Matt Zoll, PCDOT



Tucson-Pima Bicycle Advisory Committee Wednesday

September 10, 2014

Daryl Cole
Director, Tucson Department of Transportation

Dear Mr. Cole,

The Tucson-Pima County Bicycle Advisory Committee has been following the progress of the repaving work being done with Streets Bond Funding with great interest, and like other road users, we're happy to see pavement conditions being improved throughout the city. We're writing today for several reasons.

First, we want to thank you for the continued proactive efforts that your staff makes to add bike lanes by narrowing travel lanes when opportunities like repaving come up. We are grateful that this is the default behavior and not something we have to fight for.

Second, we're asking that in addition to reviewing the current lane widths to determine bike lane opportunities that your staff also looks at ADTs when possible to determine if any of the roads being repaved are oversized and if bike lanes could be added through the reduction of travel lanes. We understand that there are many cases where this can be controversial, or where local businesses or residents may resist such efforts due to the perception that the reduction of travel lanes necessarily means an increase in congestion. However, there are cases where we feel that the ADTs are low enough that there may be easy opportunities.

One such case that we feel deserves considering is a segment of roadway that will be paved soon, but unfortunately has already gone through the design process. The stretch of Speedway from Silverbell to Greasewood currently has between four and five lanes and yet an 2013 ADT of just 12,971, with the peak being 1,159 in the afternoon. This seems to be well below the "conservative" cut-off point of 18,000. With the recent acquisition of the Painted Hills property by the County, it seems unlikely that these numbers will significantly in the future, especially when you consider the current trends in driving across the country. Moreover, this is an area with no sidewalks; adding bike lanes would give pedestrians a much larger buffer from the high-speed traffic. Additionally, this is an important corridor for bikes, connecting residents to both to Pima Community College's West campus and to the popular recreational cycling routes in the Tucson Mountains.

We urge you to ask your staff to take a second look at this segment, and to approve a lane reduction to improve safety for bikes and to make the road serve all our residents better.

Thanks, as always, for your help in making the Tucson area safer and more attractive for residents who choose to bicycle.

Sincerely,

David Bachman-Williams

David Bachman-Williams Chair, TPCBAC

cc: Diahn Swartz



September 29, 2014

Mr. Daryl Cole
Director, Tucson Department of Transportation

Re: Recommended use of experimental flange filler for the Streetcar tracks at Toole Avenue and Congress Street

The Tucson Pima County Bicycle Advisory Committee recommends the placement of flexible flange filler at the corner of Congress Street and Toole Avenue where the streetcar makes its turn off of Broadway Avenue onto Congress Street. We recommend the city try this for the sake of the safety of westbound bicycling commuters coming out of the Broadway underpass and continuing onto Congress Street.

While the streetcar tracks can be relatively safe for cyclists to cross in most places this particular location is regrettably more challenging and dangerous. This is true because the safest route for these bicycling commuters is to cross the tracks when they first encounter them at the southeast corner of the CENTRO garage, then take the center lane for the short distance to the Congress Street, Fourth Avenue and Toole Avenue intersection. They would then proceed west on Congress to their destination.

However, this means crossing the tracks at a very sharp angle, far less than the absolute ideal of 90 degrees, while at the same time merging one full lane to the left. This requires paying close attention to the motor vehicle traffic in that middle lane as well as the right lane, looking behind to the left, remaining aware of the traffic light at this intersection, and crossing the tracks as safely as possible at an angle less than 90 degrees. Depending on how soon a cyclist is able to move left, this could be an angle perilously close to parallel.

We consider the danger level of bicyclists getting their front wheel trapped in the groove of the tracks or simply having a wheel slide out from under them to be alarming in this location.

While we understand there are concerns like durability we feel this particular spot deserves special attention because of the complicating factors noted above.

Sincerely,

David Bachman-Williams,
TPCBAC chairperson

letter approved at the September TPCBAC meeting



Tucson-Pima Bicycle Advisory Committee

September 10, 2014

Tucson Department of Transportation
201 N. Stone Ave. 6th Floor
Tucson, AZ 85701

RE: Streetcar Operator Training Materials involving Cyclists

To Whom It May Concern,

The Enforcement Subcommittee of the Tucson--Pima County Bicycle Advisory Committee (TPCBAC), under the Arizona Public Records Law § 39.101 et sec., requests a copy of any training materials for operators of the Sunlink Streetcar concerning interactions with cyclists along the streetcar route.

This information is not being sought for commercial purposes. The purpose of this request is to help the TPCBAC understand the safety procedures of the streetcar. The committee hopes to comment and provide input to improve the safety of the streetcar.

The TPCBAC is a public entity and we request that any and all fees be waived. If fees for these materials are unavoidable, please contact me to discuss the situation. My phone number is 520--222--6681.

Thank you for your attention,

A handwritten signature in black ink, appearing to read "Collin Forbes". The signature is written in a cursive, flowing style.

Collin Forbes, Enforcement Subcommittee Chair



Tucson-Pima Bicycle Advisory Committee

Wednesday, October 8, 2014

Daryl Cole
Director, TDOT
201 North Stone
Tucson, Arizona 85701

Dear Mr. Cole,

I'm writing you today on behalf of the BAC to express our continuing support for the Church Avenue right-sizing and protected bike lane project. The BAC most recently discussed and supported the redesign of Church Ave. in 2011, and we were led to understand that major changes on Church from Cushing to St. Mary's would be difficult due to the quality of the pavement as well as the overlapping work being done on the streetcar and on Downtown Links. We hope that now that these projects are complete that resources can be made available to improve this vital connection for residents walking and bicycling through downtown.

The Church Avenue corridor connects the neighborhoods on either side of downtown with high rates of walking/bicycling (Armory Park, Dunbar Spring, Barrio Viejo, etc.) with a myriad of destinations both downtown and on either side of it. The other North/South connections through downtown all involve single-lane underpasses (Stone, 6th Ave), streetcar tracks and awkward routing (4th Ave.), or co-mingling with high speed free-turning traffic (Stone, Broadway), so we feel that Church is one of the best opportunities for creating a bicycle facility that will be comfortable for riders of all ages and skill levels. This corridor also connects to both the new protected bike lanes on St. Mary's and the Liberty and 3rd Street Bike Boulevards, forming the backbone of a connected network in the urban core of downtown Tucson.

Additionally, as cited in the ULI report that was completed last year, the current corridor is oversized at 5 lanes for the amount of traffic it receives:

SEGMENT	YEAR	TOTAL
Congress to Cushing	2012	4858
Alameda to Congress	2011	7825
6th Street to Alameda	2011	8995

We understand that there are many specific issues that need to be considered (such as traffic queuing during rush hour or during TCC events), but we hope that your staff will find a way to rebalance the corridor to favor bikes and peds during the vast majority of the time when car traffic is not at peak, especially considering the urban nature of the corridor and the large numbers of non-automotive users who already use it.

Redesigning Church Avenue using the new protected bike lane treatments that have proven so popular on St. Mary's and in cities throughout the country would be a great leap forward for Tucson's downtown, and be compatible with its increasingly pedestrian and transit-oriented nature of our urban land use, and we look forward to providing any input or assistance necessary to help make this project a reality.

Thanks for your continuing help in making bicycling in Tucson safer and more attractive for all our residents.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ian Johnson".

Ian Johnson
Chair, Urban Core Subcommittee, TPCBAC

A handwritten signature in blue ink, appearing to read "David Bachman-Williams".

Chair, TPCBAC

David Bachman-Williams



October 9, 2014

Dear Directors of Transportation of Pima County, Marana and Oro Valley,

The facilities sub-committee of the Tucson/Pima County Bicycle Advisory Committee (BAC) has been increasingly concerned with bicycle safety along Moore Road due to the high speed of vehicular travel (45 mph), high amount of bicycle traffic during the morning rush hour to work (see appendix A), and the lack of a protective bike lane. This situation is currently not critical due to the relatively small amount of vehicular traffic present. Moore Road is mainly used only by the small amount of residents that live along it and to its north. This is all about to change though.

Moore Road is currently dirt and gravel west of Thornydale and does not connect to Dove Mountain, but Marana will be working on a road project later this year that will pave this section of road, add a bike lane, and connect Moore Rd to Dove Mountain Blvd. While this is a very welcomed addition to the area infrastructure for cyclists and drivers, it will increase the amount of vehicular traffic in an already unsafe area.

This upcoming issue is only compounded by the looming construction along Tangerine Rd. In 2016 major construction will begin along Tangerine between La Cholla Blvd. and Twin Peaks Rd. This effort will consist of adding a dedicated multi-use path, bike lanes, and additional vehicular lanes of travel. While this is yet again a very welcomed addition to the area many Oro Valley residents use Tangerine for their work commute as a connector to I-10. The construction effort will significantly slow traffic resulting in residents use of Moore Road as their route of preference, especially since it will now connect all the way down to Dove Mountain Blvd/Twin Peaks Rd allowing for access to I-10 without using Tangerine.

Bad news: we know there is an unsafe situation upcoming that will put cyclists in harms way. **Good news:** there are several ways to mitigate this unsafe condition and plenty of time to implement them if we start now. Nobody wants to see either of these road projects end since they will greatly benefit all residents in the area. The section of Moore Rd in question has portions belonging to Marana, Pima County, and Oro Valley. While this can make it more difficult to formulate a risk mitigation strategy it also allows for the potential of collaboration. The BAC recommends that the three responsible parties look into a cost sharing effort as well as a unified approach toward seeking state monies to improve Moore Rd between La Cholla and Thornydale with the addition of a bike lane. If there is simply no way to fund such a project alternatives may include a speed reduction along corridor from 45 mph to 30-35 mph, addition of signage reminding drivers to share the road, and increased enforcement in the corridor (especially during the morning rush hours). Roughly half of the bicyclists using this stretch of

Moore Rd are mountain bikers that travel from La Cholla Blvd to Como Dr. This group may be accommodated with the addition of a dedicated off-street dirt path as well.

Unfortunately, the PAG bike counts that have been ongoing for several years do not include any data along Moore Rd. Included in Appendix A of this letter is data from both Strava and Garmin websites showing heat maps for where their members are riding. While this data does not give the number of riders in this region it gives a good representation of what areas recreational riders are using. Moore Road is an important east-west link for road cyclists seeking a long ride (as can be seen in the Garmin data) and a very important connector for mountain biking trails to the North (as can be seen in the Strava data). Several groups such as the Vistoso Cyclists and Oro Valley Bicycles organize group rides on a weekly basis using this stretch of Moore Rd.

Thank you very much for your attention to this matter. If the TPCBAC can be of further assistance in this matter please feel free to call on us.

Sincerely,

Adam Wade,
TPCBAC Facilities Sub-Committee Chair

A handwritten signature in blue ink that reads "David Bachman-Williams". The signature is written in a cursive style.

David Bachman-Williams
TPCBAC chair

Appendix A: Regional maps showing ridership along Moore Rd between La Cholla and Tangerine Rd.

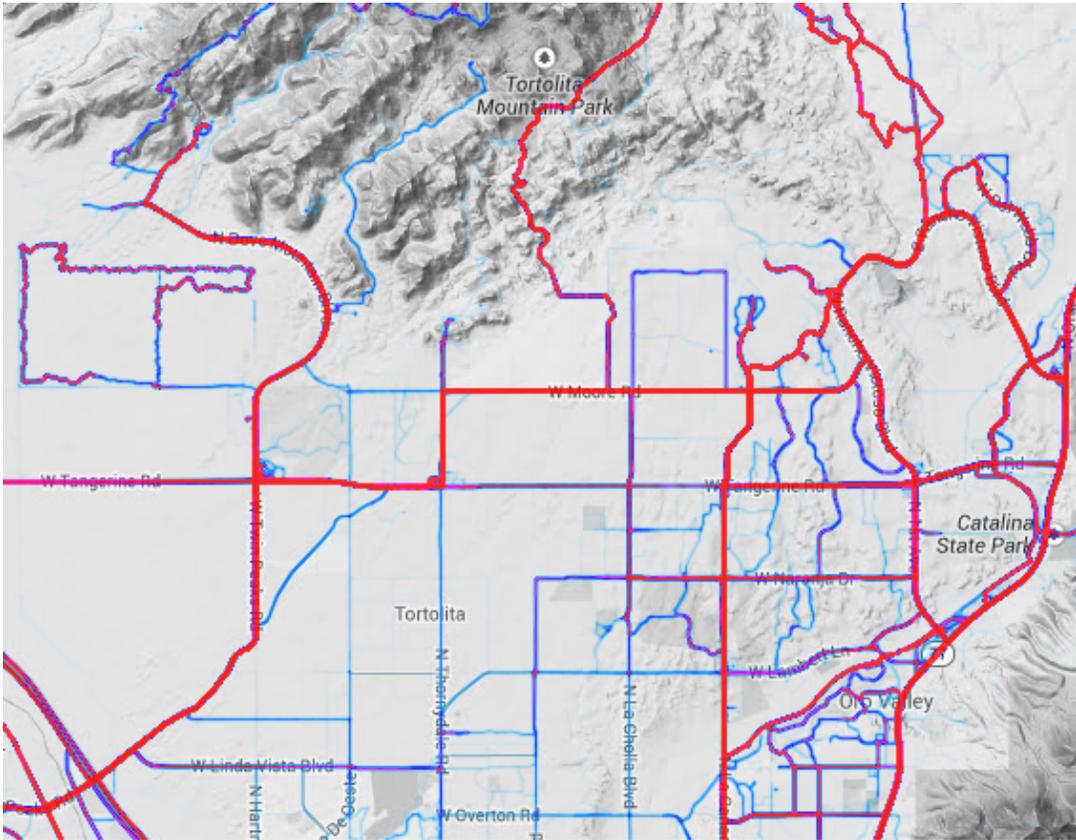


Figure 2: Strava Heatmap Example



October Events

Bike Valet Free Bike Parking at Tucson Meet Yourself

October 10-12, 10 am to festival close, Downtown Tucson

Living Streets Alliance is excited to announce a NEW featured service we hope to provide at events across the region: secure Bike Valet parking! Thanks to a donation from Visit Tucson and funding through the City of Tucson Bicycle & Pedestrian Program and Pima County's Clean Air Program, Living Streets Alliance has purchased portable equipment to provide bike valet at festivals, street fairs and sporting events.

Come see our pilot project at Tucson Meet Yourself, October 10-12th, or get in touch with us if you would like to volunteer at LSA's Bike Valet that weekend. Email gary@livingstreetsalliance.org to sign up to volunteer.

If you are an event organizer and are interested in having LSA provide secure bike valet at your next event, contact kylie@livingstreetsalliance.org

Light the Night Free Bike Light Distribution

October 14th, 5 pm while supplies last, corner of 6th Ave. and E. 7th St.

LSA is teaming up with the City of Tucson Bicycle and Pedestrian Program and Pima Association of Governments to distribute bike lights to people spotted riding around at dusk without them. Bike lights aren't just a good idea to improve visibility for both cyclists and others on the street – they're the law, and with night falling sooner this time of year, many folks are unprepared for riding safely in the dark. Come find us at the intersection of N. 6th Ave. and E. 7th Street on Tuesday, October 14th from 5 pm until supplies run out.

Bike-In Movie and Bike Tour Showcase

October 16th, 6 to 8 pm, Catalina Park, 900 N. 4th Ave.

Do you like movies? Do you like bikes? If the answer to both those questions is a resounding “Yes!” then we’ve got an event for you. We’ll start the evening with a presentation by BICAS on how to bike camp, followed by a screening of the film *To the Moon*, a documentary about 18 college students who bicycle from California to Massachusetts in order to spread awareness about cooperatives. Living Streets Alliance will also be there with lots of information on all our upcoming events. We encourage you to bring snacks and a blanket to sit on.

Kidical Mass

October 18th, 12 to 2 pm, Howell Elementary School, 401 N. Irving Ave.

Tucson’s favorite family-friendly, neighborhood bike ride starts up again once the weather begins to cool down. Mark you calendars now and get ready to join us for Kidical Mass, Saturday, October 18th starting at a NEW time – 12:00 pm – 2:00 pm

Your favorite things about Kidical Mass will be back:

- El Grupo Youth Cycling leaders will accompany smaller riders and help guide the ride
- FREE bike repair and support by BICAS
- FREE ice cream from Isabella’s Ice Cream
- FREE helmets for youth under 18 and bike maps for all

Volunteers Needed for Cyclovia Tucson

Save the Date for Tuesday, October 21st volunteer orientation

Cyclovia Tucson is Sunday, Nov. 2nd.

Email gary@livingstreetsalliance.org to volunteer.

BEST PRACTICES IN PROVIDING BICYCLE FACILITIES IN STREETCAR CORRIDORS

Arlington County, Virginia

~

National Capital Region Transportation Planning Board (TPB)
Transportation and Land-Use Connections (TLC) Program

May 4, 2011

TooleDesignGroup
Boston - Washington, DC - Seattle

Read entire report here:

<https://www.mwcog.org/transportation/activities/tlc/pdf/ArlBike-PPT.pdf>

Greater Greater Washington

The Washington, DC area is great. But it could be **greater**.

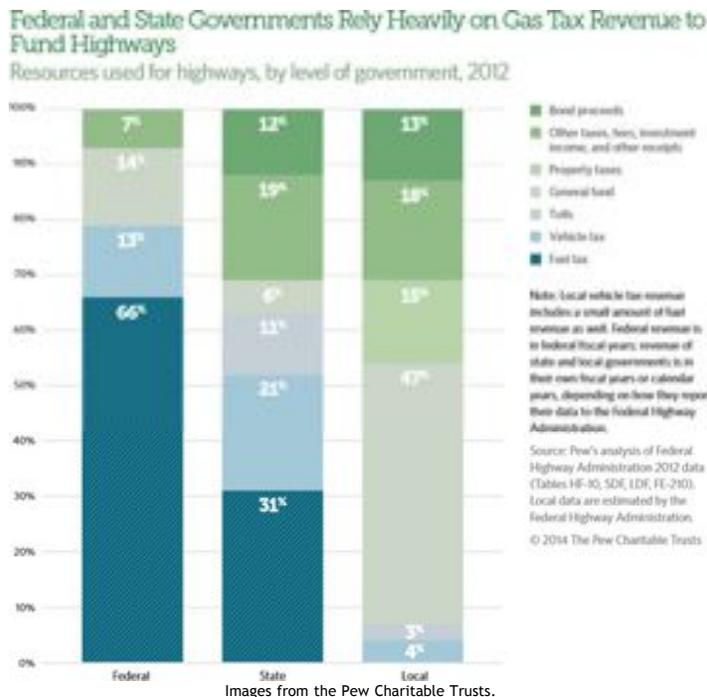
BUDGET

More proof gas taxes don't pay for roads

by [David Alpert](#) • September 25, 2014

Advocacy groups that think it's a waste of money to build transit or bicycle infrastructure often argue that since gas taxes come from drivers, so should all transportation funding.

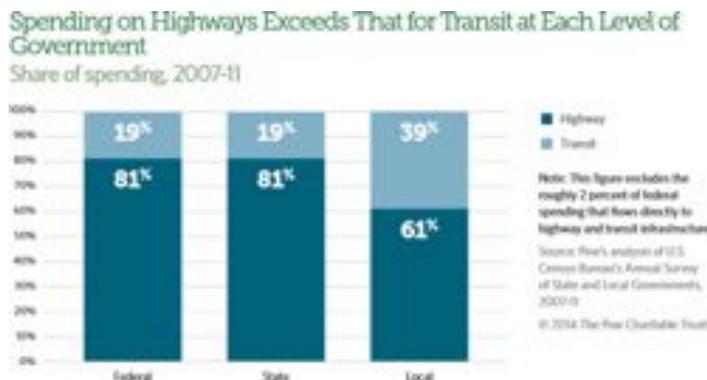
This chart from Pew shows where the transportation money comes from; it's not all drivers:



Images from the Pew Charitable Trusts.

Basically, the bluish areas are revenues which come specifically from drivers: gas taxes, vehicle taxes, and tolls. The greenish ones are other revenues: property taxes, general fund transfers, and other funds.

Some of the gas tax money goes to transit operations as well, but the vast majority doesn't:



Thanks to Matt Yglesias at Vox for pointing out this chart and the report.

[68 comments](#)

Tags: [gas taxes](#), [transportation financing](#)



Pittsburgh's Mayor Peduto Wants to "Leapfrog" Your City in Bicycling & Livability

Mayor Bill Peduto is putting the rest of the United States on notice. His city is on the rise and he fully intends on implementing bicycling, walking and complete streets policies that enhance and make his city more attractive to young talent and business. For the first time in over half a century, Pittsburgh is expecting an increase in residents as the trend in the number of people moving back to cities grows.

In September, the ProWalk ProBike ProPlace conference took place in Pittsburgh and the energy of the city was on display as was Mayor Peduto, who was very active at the event. The hope local advocates have for the mayor is apparent as Pittsburgh has implemented its first true protected bike lanes downtown and is looking to create a more multi-modal city that more fairly balances transportation modes.

When talking with the Mayor it's immediately obvious how well-versed in urbanism and the history of cities he is. Even so, he went on a study tour with The Green Lane Project to experience some of the best bicycling in Denmark this past summer.

Our interview with Mayor Peduto touches on quite a few topics of Streetfilms' audience will love. There is a real momentum: cities across the country have been electing mayors who understand one of the keys to growing a city is having equitable transportation policies that work for all people.

See the video here:

<http://vimeo.com/106252444>

NYC AND DC, PROTECTED LANE PIONEERS, JUST DOUBLED BIKING RATES IN 4 YEARS

September 18, 2014

Michael Andersen, Green Lane Project staff writer

SHARE

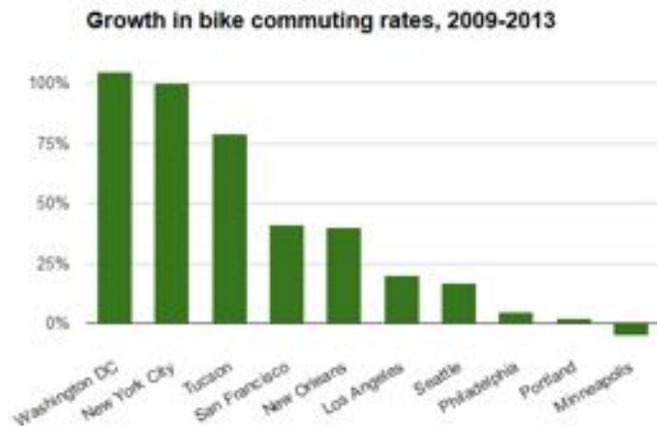


For the first and second U.S. cities to start building networks of modern protected bike lanes, the payoff seems to have arrived.

In both Washington, DC, and New York City, the rate of bike commuting has doubled since 2009, according to [Census figures](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/13_1YR/B08006/1600000US1150000|1600000US3651000) (http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/13_1YR/B08006/1600000US1150000|1600000US3651000) released Thursday.

Powered by one of the country's most successful bike sharing systems, a growing painted lane network, a handful of protected lanes and a burgeoning bicycle culture, Washington DC vaulted to 4.5 percent of commutes by bicycle in 2013, up from 2.2 percent in 2009. Among major U.S. cities, that estimate would place DC second only to Portland, Oregon as a bike commuting hub.

"DC has been coming up strong for several years (<http://www.peopleforbikes.org/blog/entry/data-confirms-it-dc-is-the-new-u.s.-bike-city-to-watch>)," said Darren Flusche, policy director for the DC-based League of American Bicyclists, in an interview. "It's the nation's capital; I keep waiting for someone to say they're the nation's bike capital."



New York City, meanwhile, has a lower biking rate — just 1.2 percent, up from 0.6 percent in 2009. But that comes out to 46,000 daily bike commuters, about as many as Portland and DC combined. New York added an estimated 10,000 bike commuters in 2013 alone, its fifth straight year of growth.

In fact, those 10,000 net new bike commuters in New York accounted for the entire nationwide increase in bike commuting in 2013.

Flusche credited the Michael Bloomberg administration, led by former Transportation Commissioner Janette Sadik-Khan, for rapidly dedicating miles of space on New York streets for painted or protected bike lanes.

"I think we're finally seeing the benefits of those decisions made as far back as '09, '10, '11," Flusche said.

The 2013 figure reflects the effects of the first six months of Citi Bike, the wildly popular bike share system launched last year in Manhattan.

Flusche said that though Washington DC is finally using protected bike lanes on L and M streets to create a simple low-stress grid, "the city's trying to catch up with the infrastructure" to support its new bike commuters.

"I'm now biking to work and hitting bike traffic jams on 15th," Flusche said, referring to the city's first protected bike lane, which opened in 2009. "You're in a pack the whole way. That didn't happen a few years ago. The city's sort of building up these arterials that allow you to bike with a lot of friends."

The Green Lane Project (<http://peopleforbikes.org/green-lane-project/>) is a PeopleForBikes program that helps U.S. cities build better bike lanes to create low-stress streets. You can follow us on [Twitter](http://twitter.com/GreenLaneProj) (<http://twitter.com/GreenLaneProj>) or [Facebook](http://facebook.com/TheGreenLaneProject) (<http://facebook.com/TheGreenLaneProject>) or sign up for our [weekly news digest](http://www.peopleforbikes.org/pages/green-lane-project-weekly-news-digest) (<http://www.peopleforbikes.org/pages/green-lane-project-weekly-news-digest>) about protected bike lanes. Story tip? Write michael@peopleforbikes.org.

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(<https://www.facebook.com/sharer/sharer.php?status=NYC%20and%20DC,%20protected%20lane%20pioneers,%20just%20doubled%20biking%20rates%20in%204%20years%20http://t.co/EVtH>
[u=http://www.peopleforbikes.org/blog/entry/nyc-and-dc-protected-lane-pioneers-just-doubled-biking-rates-in-4-years](http://www.peopleforbikes.org/blog/entry/nyc-and-dc-protected-lane-pioneers-just-doubled-biking-rates-in-4-years))

[See all Green Lanes blog entries \(/blog/category/green-lanes\)](/blog/category/green-lanes)

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WHAT IF BIKE COMFORT IS MORE IMPORTANT THAN BIKE SAFETY?

August 14, 2013

Michael Andersen, Green Lane Project staff writer

SHARE



When I'm standing near the edge of a high ledge or cliff, I know, rationally, that I'm unlikely to fall. I've spent most of my life without spontaneously tumbling sideways, and standing on the edge of a cliff doesn't change that.

I know, statistically speaking, that I am almost completely safe.

But that doesn't mean I like to stand near the edge of a cliff.



When I'm in the front seat of a roller coaster, I know, rationally, that my body is extremely safe. Tens of thousands of thrill-seekers have raised their hands in the air without being harmed.

But that doesn't stop me from being scared of raising my hands in the air in the front seat of a roller coaster.



When I'm riding my bike along a five-lane arterial road, I know, rationally, that the professional truck driver next to me is statistically unlikely to suddenly swerve to his right, crushing and killing me.

But that doesn't mean I like to bike on a street like this:



Last week, I interviewed (<http://www.peopleforbikes.org/blog/entry/at-last-feds-move-toward-a-green-light-for-protected-bike-lanes>) a man whose main ideas about street design have been rejected by mainstream bike advocates in the United States: John Forester, founder of the "vehicular cycling" concept. Because cars and bikes rarely collide when they can see each other, Forester and his allies argue, people should ride bicycles where they are most visible: right down the middle of standard traffic lanes. Protected bike lanes modeled on those in Northern Europe, they argue, move people on bikes to the side of the roadway where they're harder for people in cars to see.

There's something to this argument. If there weren't, it wouldn't have been nearly so successful in the 1970s and 1980s. To Forester and his more moderate successors, such as Bicycle Quarterly's Jan Heine, peoples' desire to use protected bike lanes is irrational and therefore unjustifiable. (<http://janheine.wordpress.com/2013/05/21/separated-cycle-paths-a-summary/>)

"Most Americans suffer from bicyclist inferiority complex," Forester told me. "Most of the things that they like appeal to their phobias."

There's a standard response to Forester, Heine and others who make this case against protected bike lanes: that although no intersection is perfect and a given protected lane might slightly increase the short-term risk of collision at a given intersection, a city that offers a robust network of protected lanes will actually become safer in the long run, because more people will ride bikes (http://en.wikipedia.org/wiki/Safety_in_numbers#Examples_of_substantial_increases_in_cycling_associated_with_reduction_in_danger)

This is a pretty strong argument.

But is it the best one?

What if Forester, Heine and others are using the wrong metric to measure the success of a bike lane? What if "safety," as calculated by government statisticians who sit far away from speeding semi trailers, isn't actually a bike lane's most precious characteristic?

What if bike designers, instead of arguing about safety – an argument that, to be clear, I think protected bike lanes would win – decided that **the most important measure of a good bikeway is whether people tend to like it?**

I'm not arguing that safety is unimportant. Obviously nonprofessionals are imperfect judges of whether a particular lane or intersection is safe, and cities must work carefully to design good, safe intersections with few bike-car conflicts.

But when professionals make safety their only absolute value, they presume that physical safety is the most important value in people's lives. And that assumption is demonstrably false. Of course people want safety. But they want other things, too.

A restaurant doesn't measure its success by the percentage of people who dine there without getting sick. It measures success by the number of people who come in the door, how much they pay and how often they return. A public transit line isn't funded by the federal government based on its anticipated vehicle failure rate. It's funded based on the number of people who are expected to use it.

And as for bike infrastructure, here's the thing: as one study (<http://otrec.us/project/33>) after another (<http://www.streetsblog.org/2008/10/20/study-confirms-safer->) has found, people go out of their way to use bike lanes, especially protected bike lanes.

safety)

[See all Green Lanes blog entries \(/blog/category/green-lanes\)](/blog/category/green-lanes)

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The image shows a notification box with a white background and a thin grey border. Inside the box, the text "Ghostery blocked comments powered by Disqus." is centered. Below the text, there are three small icons: a blue ghost-like figure with a red 'X' over its face, a blue play button icon, and a blue circular icon with a white plus sign.



Why 12-Foot Traffic Lanes Are Disastrous for Safety and Must Be Replaced Now

Let's make "10 not 12!" a new mantra for saving our cities and towns.

JEFF SPECK |  @JeffSpeckAICP | 11:50 AM ET |  Comments



When state DOTs bring streets through cities, they apply highway standards (above, Okeechobee Boulevard in West Palm Beach, Florida). (Screenshot via Google Maps)

A friend of mine heads an office in the White House. I never see him anymore, except at the occasional black tie design dinner, where he is always good for a couple of gin and tonics as the crowd disperses. At the last such event, he asked me a question. Or maybe he didn't. But I answered it.

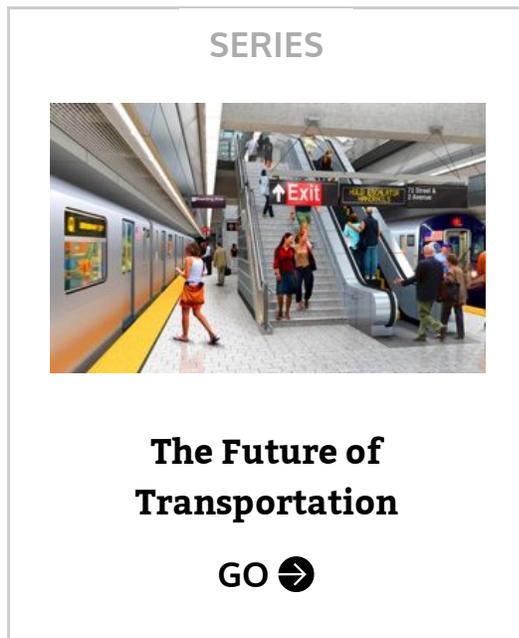
"What's the number one most important thing that we have to fight for?" I said.

"You mean, besides corporations being people and money being speech?"

"Besides that."

"Well that's easy: 10-foot lanes instead of 12-foot lanes."

"Explain."



And so I did, brilliantly. So brilliantly that the White House issued an Executive Order the very next day. Or so I imagined; such is the power of gin.

Sobered by my now palpable failure, I have steeled myself for the task of explaining here, in a manner that can never be disputed or ignored, why the single best thing we can do for the health, wealth, and integrity of this great nation is to forbid the construction, ever again, of any traffic lane wider than 10 feet.

(Before beginning, let me thank the traffic engineers Paul Moore and Theodore Petritsch, who taught me most of this stuff. Yes, there are some good ones out there. This article borrows heavily from an article by Petritsch, ["The Influence of Lane Widths on Safety and Capacity: A Summary of the Latest Findings."](#))

A little background: First, we are talking only about high-volume streets here. Neighborhood streets can have much narrower lanes. The classic American residential street has a 12-foot lane that handles traffic *in two directions*. And many busy streets in my hometown of Washington, D.C., have eight-foot lanes that function wonderfully. These are as safe and efficient as they are illegal in most of the United States, and we New Urbanists have written about them plenty before, and built more than a few. But what concerns us here are downtown streets, suburban arterials and collectors, and those other streets that are expected to handle a good amount of traffic, and are thus subject to the mandate of free flow.

Second, you should know that these streets used to be made up of 10-foot lanes. Many of them still exist, especially in older cities, where there is no room for anything larger. The success of these streets has had little impact on the traffic-engineering establishment, which, over the decades, has pushed the standard upward, almost nationwide, first to 11 feet, and then to 12. Now, in almost every place I work, I find that certain streets are held to a 12-foot standard, if not by the city, then by a state or a county department of transportation.

States and counties believe that wider lanes are safer. And in this belief, they are dead wrong.

In some cases, a state or county controls only a small number of downtown streets. In other cases, they control them all. In a typical city, like Cedar Rapids or Fort Lauderdale, the most important street or streets downtown are owned by the state. In Boise, every single downtown street is owned by the Ada County Highway District, an organization that, if it won't relinquish its streets to the city, should at least feel obliged to change its name. And states and counties almost always apply a 12-foot standard.

Why do they do this? Because they believe that wider lanes are safer. And in this belief, they are dead wrong. Or, to be more accurate, they are wrong, and thousands of Americans are dead.

They are wrong because of a fundamental error that underlies the practice of traffic engineering—and many other disciplines—an outright refusal to acknowledge that human behavior is impacted by its environment. This error applies to traffic planning, as state DOTs widen highways to reduce congestion, in complete ignorance of all the data proving that new lanes will be clogged by the new drivers that they invite. And it applies to safety planning, as traffic engineers, designing for the drunk who's texting at midnight, widen our city streets so that the things that drivers might hit are further away.

The logic is simple enough, and makes reasonable sense when applied to the design of high-speed roads. Think about your behavior when you enter a highway. If you are like me, you take note of the posted speed limit, set your cruise control for 5 m.p.h. above that limit, and you're good to go. We do this because we know that we will encounter a consistent environment free of impediments to high-speed travel. Traffic engineers know that we will behave this way, and that is why they design highways for speeds well above their posted speed limits.

Unfortunately, trained to expect this sort of behavior, highway engineers apply the same logic to the design of city streets, where people behave in an entirely different way. On city streets, most drivers ignore posted speed limits, and instead drive the speed at which they feel safe. That speed is set by the cues provided by the environment. Are there other cars near me? Is an intersection approaching? Can I see around that corner? Are there trees and buildings near the road? Are there people walking or biking nearby? And: How wide is my lane?

When lanes are built too wide, pedestrians are forced to walk further across streets on which cars are moving too fast and bikes don't fit.

All of these factors matter, and others, too. The simplest one to discuss, and probably the most impactful, is lane width. When lanes are built too wide, many bad things happen. In a sentence: pedestrians are forced to walk further across streets on which cars are moving too fast and bikes don't fit.

In the paragraphs that follow, I will lay out the evidence against 12-foot lanes, evidence compiled by traffic engineers, for traffic engineers. When presented with this evidence, DOT officials will face a mandate: provide conflicting evidence, or give in. In over a year of searching for conflicting evidence, I have failed to find any. The closest I came was the following conversation, with a

DOT district commissioner in a western state, which I recorded faithfully within moments of it taking place:

"Yeah, you've got your studies that say that 10-foot lanes are safer than 12-foot lanes. But I've got a pile of studies *this* high," he insisted, waving at his hip, "that say the opposite."

"Wonderful," I said. "May I see them?"

"No. They're from the early days. I threw them out."

Emboldened by that exchange, I will again present the evidence at hand. First, we will investigate what the American Association of State Highway and Transportation Officials *Green Book*, the traffic engineers' bible, has to say on the subject. Then we will review the very few studies that compare crash statistics and driver speeds on lanes of different widths. These will allow us to draw some clear conclusions about safety.

Consulting the Green Book

For traffic engineers, AASHTO is the keeper of the flame. Its "Green Book," the *Policy on Geometric Design of Highways and Streets*, is the primary source for determining whether a road design is an accepted practice. As such, it is useful in protecting engineers against lawsuits; if something is in the *Green Book*, it's "safe."

Given the protection it affords, nobody questions the *Green Book*. Never mind that very little of it is evidence-based, and that there are no footnotes justifying its pronouncements. I mean, does the Bible have footnotes?

Whether or not it reflects reality, the *Green Book's* position on lane widths is more than relevant, since the engineers need its blessing to modify a standard. Theodore Petritsch relates this position as follows:

For rural and urban arterials, lane widths may vary from 10 to 12 feet. 12-foot lanes should be used where practical on higher-speed, free-flowing, principal arterials. However, under interrupted-flow

(signalized) conditions operating at lower speeds (35 MPH or less), narrower lane widths are normally quite adequate and have some advantages.

Here, the takeaway is clear: AASHTO says that 10-foot lanes are just fine—for what it's worth.

The Studies: Rare but Conclusive

A number of studies have been completed that blame wider lanes for an epidemic of vehicular carnage. One of them, presented by Rutgers professor Robert Noland at the 80th annual meeting of the Transportation Research Board, determined that increased lane widths could be blamed for approximately 900 additional traffic fatalities per year. Unfortunately, Noland is a mere Ph.D. and not a practicing engineer. His evidence apparently didn't mean squat to the TRB. If you don't have short-sleeved white shirt and a pocket protector, you may as well stay home.

Happily, it turns out that engineers have conducted studies of their own. Two of these deserve our rapt attention. The first study, called ["Effective Utilization of Street Width on Urban Arterials,"](#) was completed by the TRB itself. It found the following:

... all projects evaluated during the course of the study that consisted of lane widths exclusively of 10 feet or more [rather than 12 feet] resulted in accident rates that were either reduced or unchanged.

So far so good. A second study, called ["Relationship of Lane Width to Safety for Urban and Suburban Arterials,"](#) was conducted by the conservative Midwest Research Center. Comparing 10- to 11-foot lanes to 12-foot lanes, it found:

A safety evaluation of lane widths for arterial roadway segments found no indication, except in limited cases, that the use of narrower lanes increases crash frequencies. The lane widths in the analyses conducted were generally either not statistically significant or indicated that narrower lanes were associated with lower rather than higher crash frequencies.

It is clear, then, that at the very least, 10-foot lanes cause no more accidents than 12-foot lanes, and may cause fewer. But what about the severity of these accidents, a subject on which these studies appear to be mute?

Here we can make use of another study and some common sense. We all know that people drive faster in wider lanes, but we need the engineers to say it. Fortunately, the Texas Transportation Institute, as old-school as they come, [has done just that](#). They state:

On suburban arterial straight sections away from a traffic signal, higher speeds should be expected with greater lane widths.

Granted, this study covers only one type of road, but there is no reason to expect opposite results on, for example, straight urban roads. The same logic would apply, although perhaps less dramatically: people drive faster when they have less fear of veering off track, so wider lanes invite higher speeds.

A pedestrian hit by a car traveling 30 m.p.h. is between seven and nine times as likely to be killed as

one hit by a car traveling 20 m.p.h.

To conclude this radical thought experiment, we need to confirm another commonsense assumption, that higher-speed crashes cause more injuries and deaths than lower-speed crashes. This has been amply demonstrated to apply to all road users, especially pedestrians. According to a broad collection of studies, a pedestrian hit by a car traveling 30 m.p.h. at the time of impact is between seven and nine times as likely to be killed as one hit by a car traveling 20 m.p.h. This tremendously sharp upward fatality curve means that, at urban motoring speeds, every single mile per hour counts.

All of the above data, studies, and pronouncements, collected and disseminated by the mainstream traffic engineering establishment, point to the following conclusion: 10-foot lanes cause no more accidents than 12-foot lanes, and they may cause fewer. These accidents can be expected to be slower, and thus less deadly. Therefore, 10-foot lanes are safer than 12-foot lanes.

Protecting Capacity

Before finishing, we need to investigate the carrying capacity of different width lanes, since traffic volume remains a legitimate concern. If safety were the only goal of traffic planning, all streets would be one-lane wide—or better yet, zero lanes wide. The fact that they are not means that we, as a society, are more than willing to sacrifice lives for automobility. So, what's the data?

Here, as again reported by Petritsch, a thorough literature search conducted by the Florida DOT yielded these findings:

The measured saturation flow rates are similar for lane widths between 10 feet and 12 feet. ... Thus, so long as all other geometric and traffic signalization conditions remain constant, there is no measurable decrease in urban street capacity when through lane widths are narrowed from 12 feet to 10 feet.

It is striking to hear this news from FDOT, the agency that may preside over the greatest pedestrian massacre in U.S. history. Four out of the five deadliest American cities for walking are currently in Florida. This is by design: in no other state has the DOT had such a powerful influence on the design of urban streets.

Pointing Fingers

Alarmed by its horrifying safety ranking—and the barrage of resulting bad publicity—FDOT has taken bold measures to improve pedestrian safety. It released just last year a 44-page *Florida Pedestrian and Bicycle Strategic Safety Plan*. Unfortunately, while this document talks plenty about such things as driver, cyclist, and pedestrian education, only two of its pages deal remotely with the real culprit, traffic engineering. Here, we are told that FDOT intends to "implement pedestrian and bicycle best practices," a phrase that is fairly meaningless without further definition.

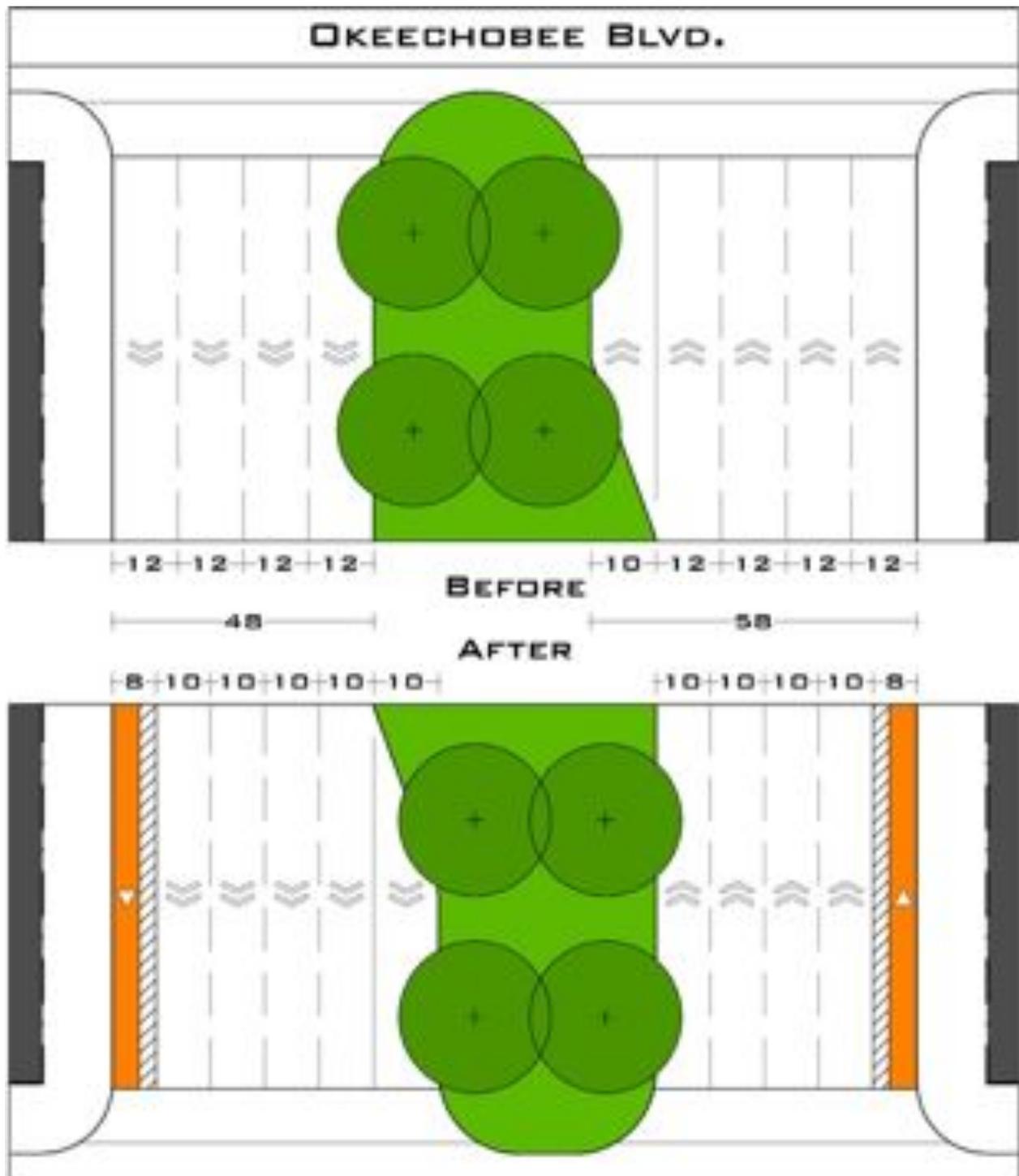
To its credit, the plan advocates for the application of a "complete streets" policy to benefit cyclists and pedestrians. But such policies, as we have learned, make sure that some streets include bike lanes and sidewalks, but rarely require the dimensional properties that make them safe. Nowhere in the entire *Strategic Safety Plan* are lane widths discussed, or any other design feature of the roadway that might encourage deadly speeds.

In fact, you can learn all you need to know about this effort by glancing at the cover of the report, which is stamped with the project motto: "Alert Today, Alive Tomorrow." Think about that statement, and what it implies. In an encounter between a car and a pedestrian, whose life is at risk? Who, then, is expected to reform her behavior? Certainly not the driver—and most certainly not any engineers who endanger their populations with 12-foot lanes.

A Test Case

I believe that FDOT—and every DOT—is capable of reform, but experience suggests that this will only happen when enough people make a stink. In Florida, we will be able to gauge the DOT's willingness to enter the reality-based community by how it responds to a proposal recently made to restripe Okeechobee Boulevard, a deadly state highway that cuts through downtown West Palm Beach. Its nine lanes separate the Palm Beach County Convention

Center from everything that conventioners walk to, and are a nightmare to walk across or beside. These lanes, of course, are 12 feet wide.



Before and after drawings for Okeechobee Boulevard in West Palm Beach, Florida, show how narrowing 12-foot lanes to 10 feet creates ample room for protected bike lanes. (Image: Speck & Associates LLC)

What would happen if these lanes were reduced to 10-foot wide, as proposed?

Three things. First, cars would drive more cautiously. Second, there would be roughly eight feet available on each side of the street for creating protected cycle lanes, buffered by solid curbs. Third, the presence of these bike lanes would make the sidewalks safer to walk along. All in all, an easy, relatively inexpensive win-win-win that DOT could fund tomorrow.

But will they? Only if they are capable of reform. Let's find out. The agency's bike and pedestrian coordinator, Billy Hattaway, is one of the good ones. But does he have the power to move FDOT to a 10-foot standard?

Moving beyond Florida, the task is clear. Our lives are currently being put at risk daily by fifty state DOTs and hundreds of county road commissions who mistakenly believe that high-speed street standards make our cities and towns safer. In my most considered opinion, these agencies have blood on their hands, and more than a little. There are many standards that they need to change, but the easiest and most important is probably the 12-foot lane. Armed with the facts, we can force this change. But only if we do it together.

It's time to push this discussion to its logical conclusion. Until conflicting evidence can be mustered, the burden of proof now rests with the DOTs. Until they can document otherwise, every urban 12-foot lane that is not narrowed to 10 feet represents a form of criminal negligence; every injury and death, perhaps avoidable, not avoided—by choice.

In the meantime, I welcome evidence to the contrary. We've shown them our studies; now let them show us theirs. Unless, of course, they've thrown them out.

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About the Author



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